

9  
CLAIMS

1. A glass composition intended for the manufacture of thermally stable substrates or plates characterized in that it comprises the constituents below, in the following proportions by weight :

	SiO <sub>2</sub>	67 - 75 %
	Al <sub>2</sub> O <sub>3</sub>	0.5 - 1 %
	ZrO <sub>2</sub>	2 - 7 %
	Na <sub>2</sub> O	2 - 9 %
10	K <sub>2</sub> O	4 - 11 %
	MgO	0 - 5 %
	CaO	5 - 10 %
	SrO	5 - 12 %
	BaO	0 - 3 %
15	B <sub>2</sub> O <sub>3</sub>	0 - 3 %
	Li <sub>2</sub> O	0 - 2 %

with the relationships :

$$\text{Na}_2\text{O} + \text{K}_2\text{O} > 10 \%$$

$$\text{MgO} + \text{CaO} + \text{SrO} + \text{BaO} > 12 \%$$

20 and said composition having a thermal expansion coefficient between  $80$  and  $90 \times 10^{-7}/^{\circ}\text{C}$ , especially less than  $85 \times 10^{-7}/^{\circ}\text{C}$ , and preferably between  $81$  and  $84 \times 10^{-7}/^{\circ}\text{C}$ .

2. The composition as claimed in claim 1, characterized in that the sum of the MgO, CaO, SrO and BaO contents is greater than or equal to 15 %.
3. The composition as claimed in either of claims 1 and 2, characterized in that the sum of the Na<sub>2</sub>O and K<sub>2</sub>O contents is between 10 and 15 %.
4. The composition as claimed in one of claims 1 to 3, characterized in that the weight ratio of the Na<sub>2</sub>O content to the K<sub>2</sub>O content is less than or equal to 0.7.
5. The composition as claimed in one of claims 1 to 4, characterized in that the SiO<sub>2</sub> content is less than 71 %.
- 30 6. The composition as claimed in one of claims 1 to 5, characterized in that the sum of the Al<sub>2</sub>O<sub>3</sub> and ZrO<sub>2</sub> contents is less than or equal to 6 %.

7. The composition as claimed in one of claims 1 to 6, characterized in that it comprises the constituents below in the following proportions by weight :

	SiO <sub>2</sub>	67 - 75 %
	Al <sub>2</sub> O <sub>3</sub>	0.5 - 1 %
5	ZrO <sub>2</sub>	2 - 5 %
	Na <sub>2</sub> O	2 - 4 %
	K <sub>2</sub> O	7 - 11 %
	MgO	0 - 2 %
	CaO	6 - 10 %
10	SrO	6 - 12 %
	BaO	0 - 2 %
	B <sub>2</sub> O <sub>3</sub>	0 - 3 %
	Li <sub>2</sub> O	0 - 2 %.

8. The composition as claimed in one of claims 1 to 7, characterized in that it has a strain point of greater than 570°C, preferably greater than 580°C.

9. The composition as claimed in one of claims 1 to 8, characterized in that it has a liquidus temperature  $T_{liq}$  of at most 1180°C, preferably between 1130 and 1170°C.

10. The composition as claimed in one of claims 1 to 9, characterized in that it has a viscosity corresponding to  $\log \eta = 3.5$  at a temperature at least equal to 1160°C, preferably between 1160 and 1200°C.

11. The composition as claimed in one of claims 1 to 10, characterized in that it has a viscosity corresponding to  $\log \eta = 2$  at a temperature not exceeding 1560°C, preferably 1550°C.

12. The composition as claimed in one of claims 1 to 11, characterized in that it has a density at 25°C of less than 3, preferably around 2.7.

13. The use of the composition as claimed in one of claims 1 to 12 for the manufacture of a substrate for a plasma-type emissive display, a luminescent display or a field-emission display, especially starting from a glass sheet cut from a glass ribbon obtained by floating the glass on a bath of molten metal.

14. The use of the composition as claimed in one of claims 1 to 12 for the manufacture of fire-resistant glazing, especially produced from a sheet of glass cut from a ribbon of glass obtained by floating the glass on a bath of molten metal.